

UNPUBLISHED

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF IOWA
WESTERN DIVISION

MARK GREGG,

Plaintiff,

vs.

INDIAN MOTORCYCLE CORPORATION,

Defendant.

No. C03-4091-DEO

**ORDER ON MOTIONS TO
PRECLUDE CERTAIN EXPERT
TESTIMONY AND LAY
OPINION TESTIMONY AND TO
SEQUESTER WITNESS**

I. INTRODUCTION

This matter is before the court on several motions file by the parties requesting evidentiary rulings. On January 3, 2006, Indian Motorcycle Corporation (“Indian”) filed a motion pursuant to *Daubert v. Merrill Dow Pharmaceutical, Inc.*, 509 U.S. 579, 113 S. Ct. 2786, 125 L. Ed. 2d 469 (1993), as extended by *Kumho Tire Co., Ltd. v. Carmichael*, 526 U.S. 137, 119 S. Ct. 1167, 143 L. Ed. 2d 238 (1999), to preclude certain expert testimony of George F. Dunham (**Doc. No. 62**, the “Dunham motion”). On June 23, 2006, Indian filed a motion to exclude certain expert testimony of Lester B. Engel, Jr., pursuant to *Daubert*. (**Doc. No. 106**, the “Engel motion”) The plaintiff Mark Gregg (“Gregg”) has resisted both motions. (Doc. Nos. 102 & 114), and Indian has replied to Gregg’s resistance to the Dunham motion. (Doc. No. 105)

The court held hearings on the motions on July 13 and August 16, 2003. The plaintiff Mark Gregg (“Gregg”) was represented at the hearings by Jeffrey L. Bratkiewicz and William Fuller. Indian was represented at the first hearing by Kevin M. Reynolds, and at the second hearing by Mr. Reynolds and Robert W. Hancock. The court heard testimony from George F. Dunham; Lester B. Engel, Jr.; and George S. Sangdahl, III. Numerous exhibits

were admitted into evidence, as shown on the minutes from the two hearings. (*See* Doc. Nos. 117 & 132).

Subsequent to the hearing, on August 21, 2006, Indian supplemented its motions for the purpose of identifying non-*Daubert* evidentiary issues upon which Indian requests a ruling. (*See* Doc. No. 133) On August 25, 2006, Gregg filed a response to Indian's identification of non-*Daubert* evidentiary issues. (Doc. No. 138) Both parties filed supplemental briefs on the *Daubert* issues. (Doc. Nos. 136 & 140)

In addition, on August 9, 2006, Gregg filed a non-*Daubert* motion (**Doc. No. 121**) to preclude certain opinion testimony of Douglas Manternach. Indian resisted the motion on August 14, 2006 (Doc. No. 127). Gregg filed a reply brief in support of the motion on August 15, 2006 (Doc. No. 131), and a supplemental brief on August 25, 2006 (Doc. No. 139). Also on August 9, 2006, Gregg filed a motion (**Doc. No. 120**) to sequester Mr. Manternach during the trial. On August 10, 2006, Gregg filed a supplemental brief in support of the motion to sequester. (Doc. No. 122) Indian resisted the motion on August 10, 2006. (Doc. No. 125) Gregg filed a reply brief on August 15, 2006. (Doc. No. 129)

The motions now are fully submitted. The court has considered the evidence and the parties' arguments, and turns to consideration of the motions. The court first will provide some background facts underlying this lawsuit. The court then will discuss the standards applicable to Indian's *Daubert* motions and other requests for evidentiary rulings, followed by an examination of the particular expert opinions Indian seeks to exclude from the trial. Finally, the court will consider Gregg's motion to prohibit opinion testimony from Douglas Manternach, and his motion to sequester Mr. Manternach during the trial.

II. BACKGROUND FACTS

On May 22, 2002, Gregg was injured in a single-vehicle motorcycle accident. In this lawsuit, he alleges the accident was caused by a defect in his 2000 Indian Chief motorcycle ("the motorcycle"), which was designed, manufactured, assembled, and sold by Indian. The

motorcycle is a “soft tail” design, which has a movable rear suspension. The main frame of the motorcycle supports the engine and rider, and the rear wheel is rigidly mounted onto a “swing arm” that connects to the motorcycle’s main frame. The swing arm pivots up and down with the motorcycle as it hits bumps in the roadway. Two rear shock absorbers limit the up-and-down movement of the swing arm. Each shock absorber has two eyes, or connection points – one in the front and one in the back. The front of each shock absorber is bolted to the motorcycle’s main frame. The rear of each shock absorber is bolted to the swing arm. After Gregg’s accident, one of these rear bolts – the bolt connecting the left shock absorber to the swing arm (“the bolt in question”) – was found broken.

At the time of the accident, Gregg was traveling eastbound on Iowa Highway 9, in a wide, unobstructed area that allows crosswinds and gusts on occasion. On the date of the accident, there was a variable crosswind from the south at about 25 mph, with gusts up to 34 mph. Gregg accelerated and pulled out to pass a van. As he passed the front of the van, the motorcycle began to weave or wobble, and Gregg lost control of the motorcycle, causing the motorcycle to leave the roadway. Gregg was thrown from the motorcycle and suffered injuries. Gregg contends the bolt in question broke, causing the motorcycle to weave or wobble, and resulting in the accident. He claims a fatigue fracture, that was undetectable to him, started in the bolt in question sometime prior to the accident, and the fracture progressively worsened as the motorcycle was used, ultimately causing the bolt to break when he pulled out to pass the van. He further alleges Indian was aware of problems involving high-speed wobble or weave in this particular model of motorcycle, but Indian negligently failed to warn its customers and dealers about the problem or take steps to remedy the problem.

Indian claims the bolt in question actually broke sometime prior to the accident. Among other things, Indian argues any reasonable motorcycle rider would have been able to tell there was a problem with the rear suspension after the bolt broke and would not have ridden the motorcycle. Indian claims Gregg was negligent in riding the motorcycle when he

knew or should have known of the suspension problem. Indian contends the accident was not caused by the bolt breaking, but by a combination of the already-broken bolt, a crosswind or gust of wind, Gregg's quick application of the motorcycle's brakes, and Gregg's attempts to correct the weave or wobble through steering corrections. Indian notes occupants of the van Gregg was passing stated it appeared Gregg had been caught by a gust of wind as he passed the front of the van.

The court will discuss the facts further, as necessary, in connection with each witness's opinions that are at issue in the current motions. Before examining the specific opinions at issue, the court will discuss the standards applicable to *Daubert* challenges and requests for evidentiary rulings.

III. APPLICABLE LAW

In a diversity case in federal court, the question of whether expert testimony is admissible is a matter governed by federal, rather than state, law. *See Wagner v. Hesston Corp.*, 450 F.3d 756, 760 (8th Cir. 2006) (citing *Unrein v. Timesavers, Inc.*, 394 F.3d 1008, 1011 (8th Cir. 2005); and *Peitzmeier v. Hennessy Indus., Inc.*, 97 F.3d 293, 297 (8th Cir. 1996)); *Clark v. Heidrick*, 150 F.3d 912, 914 (8th Cir. 1998) (citing *Fox v. Dannenberg*, 906 F.2d 1253, 1258 (8th Cir. 1990)); *see also Wheeling Pittsburgh Steel Corp. v. Beelman River Terminals, Inc.*, 254 F.3d 706, 711 (8th Cir. 2001).

In *Daubert*, the Supreme Court explained that under the Federal Rules of Evidence, and particularly Rule 702, a trial judge is charged with a gate-keeping responsibility to ensure all expert testimony or evidence admitted at trial is relevant, reliable, and “‘will assist the trier of fact to understand the evidence or to determine a fact in issue.’” *Daubert*, 509 U.S. at 589, 113 S. Ct. at 2795 (quoting Fed. R. Evid. 702; emphasis removed). The Court noted an expert witness “is permitted wide latitude to offer opinions, including those that are not based on firsthand knowledge or observation. . . . Presumably, this relaxation of the usual requirement of firsthand knowledge . . . is premised on an assumption that the expert’s

opinion will have a reliable basis in the knowledge and experience of his discipline.” *Daubert*, 509 U.S. at 592, 113 S. Ct. at 2796.

When proposed expert testimony is scientific in nature, the trial judge must make “a preliminary assessment of whether the reasoning or methodology underlying the testimony is scientifically valid and of whether that reasoning or methodology properly can be applied to the facts in issue.” *Daubert*, 509 U.S. at 592-93, 113 S. Ct. at 2796. Although the Court expressly declined to set out a definitive checklist or test for making this determination, the Court noted several key areas of inquiry that ordinarily will apply “in determining whether a theory or technique is scientific knowledge that will assist the trier of fact,” including: (1) whether the theory or technique “can be (and has been) tested”; (2) “whether the theory or technique has been subjected to peer review and publication”; (3) the “known or potential rate of error . . . and the existence and maintenance of standards controlling the technique’s operation”; and (4) whether the theory or technique has obtained general acceptance within the community. *Daubert*, 509 U.S. at 593-95, 113 S. Ct. at 2796-97.

The Court observed that this inquiry is flexible. “Its overarching subject is the scientific validity -- and thus the evidentiary relevance and reliability -- of the principles that underlie a proposed submission. The focus, of course, must be solely on principles and methodology, not on the conclusions that they generate.” *Daubert*, 509 U.S. at 594-95, 113 S. Ct. at 2797. The trial court’s ultimate task is to ensure “that an expert’s testimony both rests on a reliable foundation and is relevant to the task at hand. Pertinent evidence based on scientifically valid principles will satisfy those demands.” *Daubert*, 509 U.S. at 597, 113 S. Ct. at 2799. *See United States v. Boswell*, 270 F.3d 1200, 1204 (8th Cir. 2001).

In *Kumho Tire*, the Court extended the *Daubert* inquiry to *all* types of expert testimony, not just to scientific testimony. The Court noted that in the trial court’s inquiry into the relevance and reliability of expert testimony, the trial court *may* consider the factors which the *Daubert* Court suggested might be relevant. Noting that in some cases an expert’s personal knowledge or experience may be the focus, as opposed to the scientific foundation

of an opinion, the Court held the *Daubert* factors “may or may not be pertinent in assessing reliability, depending on the nature of the issue, the expert’s particular expertise, and the subject of his testimony.” *Kumho Tire*, 526 U.S. at 150, 119 S. Ct. at 1175 (citation omitted). The circumstances of each particular case will determine the precise nature of the inquiry to be undertaken by the trial court in performing its gate-keeping function under *Daubert*. *Id.*

The *Kumho Tire* Court explained further, “The trial court must have the same kind of latitude in deciding *how* to test an expert’s reliability, and to decide whether or when special briefing or other proceedings are needed to investigate reliability, as it enjoys when it decides *whether or not* that expert’s relevant testimony is reliable.” *Kumho Tire*, 526 U.S. at 152, 119 S. Ct. at 1176 (emphasis by the Court).

In its capacity as gatekeeper, the court is to “separate[] expert opinion evidence based on ‘good grounds’ from subjective speculation that masquerades as scientific knowledge.” *Glastetter v. Novartis Phar. Corp.*, 252 F.3d 986, 989 (8th Cir. 2001). Although the trial court has substantial latitude to determine whether offered expert testimony is reliable, the court should keep in mind that Rule 702 reflects a liberalized approach to the admissibility of expert testimony. *See Reed & Sons Partnership*, 280 F.3d 1212, 1215 (8th Cir. 2002) (“Trial courts have substantial latitude to determine whether specific expert testimony is reliable, and they may consider some or all of the factors listed in *Daubert* . . . when evaluating reliability.”); *In re Air Crash at Little Rock, Ark.*, 291 F.3d 503, 514 (8th Cir. 2002) (same); *Lauzon v. Senco Prods., Inc.*, 270 F. 3d 681, 685-86 (8th Cir. 2001) (“Rule 702 reflects an attempt to liberalize the rules governing the admission of expert testimony,” citing *Weisgram v. Marley Co.*, 169 F.3d 514, 523 (8th Cir. 1999)); *Arcoren v. United States*, 929 F.2d 1235, 1239 (8th Cir. 1991) (Rule 702 is a rule of admissibility rather than exclusion). Trial courts should apply the principle that “[e]xpert testimony is admissible if it is reliable and will help the jury understand the evidence or decide a fact in issue.” *Hartley v. Dillard’s, Inc.*, 310 F.3d 1054, 1060 (8th Cir. 2002). “[D]oubts regarding whether an expert’s testimony will be useful should generally be resolved in favor of admissibility.”

Miles v. Gen. Motors Corp., 262 F.3d 720, 724 (8th Cir. 2001) (citing *Clark*, 150 F.3d at 915). See *Lauzon*, 270 F. 3d at 687 n.2 (citing numerous authorities). A determination by a trial court to admit expert testimony is reviewed for abuse of discretion. *General Elec. Co. v. Joiner*, 522 U.S. 136, 143, 118 S. Ct. 512, 139 L. Ed. 2d 508 (1997); *Giles v. Miners, Inc.*, 242 F.3d 810, 812 (8th Cir. 2001).

In *Bonner v. ISP Technologies, Inc.*, 259 F.3d 924, 929 (8th Cir. 2001), the court emphasized that the focus under *Daubert* must be on the expert's principles and methodology, not the conclusions they generate. See also *United States v. Dico, Inc.*, 266 F.3d 864, 869 (8th Cir. 2001) ("Admissible expert testimony must be grounded upon scientifically valid reasoning or methodology.") The *Bonner* court explained:

"As a general rule, the factual basis of an expert opinion goes to the credibility of the testimony, not the admissibility, and it is up to the opposing party to examine the factual basis for the opinion in cross-examination. Only if the expert's opinion is so fundamentally unsupported that it can offer no assistance to the jury must such testimony be excluded."

Bonner, F.3d at 929-30 (quoting *Hose v. Chicago N.W. Transp. Co.*, 70 F.3d 968, 974 (8th Cir. 1995) (internal citations and quotations omitted)); see *Hartley*, 310 F.3d at 1061 (same); *Wood v. Minnesota Min. & Mfg. Co.*, 112 F.3d 306, 309 (8th Cir. 1997) (same); see also *United States v. Dico, Inc.*, 266 F.3d at 869 ("The court must examine both the relevance and the reliability of the proffered testimony, *Blue Dane Simmental Corp. v. Am. Simmental Ass'n*, 178 F.3d 1035, 1040 (8th Cir. 1999), keeping in mind that the focus, of course, must be solely on principles and methodology, not on the conclusions that they generate.").

Expert testimony also must be "sufficiently tied to the facts of the case that it will aid the jury in resolving a factual dispute." *Concord Boat Corp. v. Brunswick Corp.*, 207 F.3d 1039, 1055 (8th Cir. 2000) (citing *Daubert's* "fit" requirement). Doubts regarding usefulness generally should be resolved in favor of admissibility. *Clark*, 150 F.3d at 915.

With these factors in mind, the court turns to consideration of Indian's *Daubert* motions and requests for evidentiary rulings. The court must examine the credibility of the

experts' testimony, and determine whether the proffered testimony of each of the experts is relevant, reliable, and will assist the trier of fact – in this case, the jury – in understanding the evidence or determining a fact in issue in this case. Notably, the court's discussion will not encompass all of the opinions the experts are expected to offer at trial, but will be limited to those opinions as to which Indian has objections, together with necessary background material underlying those opinions.

IV. EXPERT OPINIONS AT ISSUE

A. George F. Dunham

Dunham is a mechanical engineer, licensed in South Dakota. He has a bachelor's degree in mechanical engineering from the South Dakota School of Mines and Technology. During the past twenty-five years, he has investigated over 200 mechanical failure accidents and fire events. This is the first time he has investigated the cause of a motorcycle accident.

Dunham testified he has reviewed copies of the accident report and witness statements from Gregg's accident, some of the depositions, and many of the documents obtained from Indian during the course of discovery. Dunham was present with Gregg's expert Lester Engel and Indian's expert George Sangdahl during the original tear-down of the motorcycle.

Dunham explained that as the swing arm on the motorcycle rotates, it comes into contact with rubber bumpers or "bumper stops." According to Dunham, Indian's documents indicate the bumper stops on the 2000 Indian Chief were mounted too high, allowing the swing arm to move past the rubber bumpers and actually come into contact with the motorcycle's frame. He indicated there are visible dents in the top of the motorcycle's swing arm evidencing where the swing arm contacted the ends of the bolts on the frame. He further stated the rubber bumpers are supposed to limit the swing arm's motion, thus limiting the amount the shock absorbers can be pulled out. According to Dunham, pulling the shock absorbers out too far creates unusual stresses on the shocks because the spring is compressed all the way, magnifying the forces being applied to all of the attachment bolts, including the

shock mount bolt that broke in this case. In Dunham's opinion, the connector bracket to which the subject bolt was attached was welded onto the swing arm at an angle, rather than straight, causing an unusual side load on the shocks and increasing the stresses on the attachment points and on the inside of the left shock absorber. In other words, Dunham opined there was misalignment of the left shock absorber, causing it to be cocked and pulled out at an angle, and exceeding the maximum misalignment specified by the shock manufacturer.

Dunham testified Indian originally manufactured the motorcycle using Sway Away brand shock absorbers. He stated Indian's records indicate the Sway Away shocks created problems due to a combination of bottoming out, coil bind, and certain failures. As a remedy, Indian switched to Progressive brand shocks, and the record indicates Gregg's shocks were changed from the Sway Away shocks to the Progressive shocks. However, Dunham stated that when Indian shipped the replacement shocks to its dealers, it did not ship new shock bolts. As a result, at the time Gregg's shocks were changed, the shock absorber bolts were not changed; the original bolts were used to attach the new shocks. Dunham opined the problems with the Sway Away shocks would have caused unusual stress on the original bolts, causing the fatigue failure to begin in the subject bolt. In his opinion, the bolts should have been replaced at the time the shocks were changed out.

In Dunham's opinion, the bolt in question failed at the time of the accident, and not prior to that time. According to Dunham, if the bolt had broken previously, Gregg would have heard a loud pop or snap, like the sound of a rifle shot; the motorcycle's seat would have lowered somewhat; and the handlebars would have appeared to be higher to Gregg as he sat on the motorcycle. Dunham indicated other motorcycle owners who have had a bolt break while they were riding have described hearing the loud sound, and then having their motorcycle suddenly become difficult to control. Dunham has opined that at the time of Gregg's accident, the bolt in question broke, and Gregg would have been "startled" when the seat dropped, adding to his loss of control. In addition, Dunham opined that a burn or scuff

mark visible on the inside of the rear fender of Gregg's motorcycle "could only have resulted from the tire rubbing against the inside of the fender." Dunham believes this happened when the bolt broke, the motorcycle dropped down, and the tire scraped against the inside of the fender.

Dunham collaborated with Engel in devising a protocol to test the flexibility of the swing arm in this case. According to Dunham, the protocol was similar to one described in a highly-regarded motorcycle design manual for testing the flexibility of swing arms. The actual testing was done by Engel. Engel tested the lateral flexibility of three types of swing arms: the one on Gregg's model of motorcycle; a 2002 model Indian motorcycle; and a Harley-Davidson motorcycle.¹ In each test, the swing arm was placed on its side, held rigid at the front, and then subjected to a load to see how much pressure it took to make the swing arm bend. According to Dunham, it would be nearly impossible to apply load to the swing arm laterally for testing purposes, so they opted to apply load from above. Dunham and Engel wanted to test the flex or strength of the swing arms to get comparative data from the three motorcycle designs. They were interested in the amount of force it would take to bend the swing arm. They specifically tested to see how much force would be necessary to bend the swing arm 1/4", which is the amount of bend they found would be necessary to allow the belt to contact the white sidewall of the tire, something Dunham believes happened in this case.

Dunham stated that in performing his calculations, he used the test data provided by Engel. Engel tested the subject motorcycle's swing arm three times, and each of the exemplars twice. Dunham averaged the results with respect to the amount of load that would be required to bend the swing arm 1/4", and he used the average load for his analyses. He noted he did not do a statistical evaluation of the probable error rate for the test data because he assumed the error rate would be similar for each of the data sets; the same test procedure,

¹Dunham testified he had no input into what specific swing arms were selected to be tested. However, it was his understanding that Gregg's attorneys had requested additional swing arms from Indian for testing purposes, but Indian had failed to provide any additional swing arms.

instrumentation, and fixtures were used in each of the tests. Dunham was interested in comparative values, not absolute values, and he therefore believed he had reasonable data to compare for his analyses. However, at the hearing, Dunham admitted the better practice would have been to use only the data from the last of the tests, rather than an average from all of the tests. Dunham's calculations, using the averages from Engel's testing, resulted in a finding that just before and at the time of the accident, the shock bolts on Gregg's motorcycle were subjected to some 865 pounds of lateral load. Dunham also concluded (as stated in his deposition testimony) that Indian's torque specification for the shock bolts on Gregg's motorcycle was "too high."

In addition to defects in the bolt itself and the angle of the mounting bracket, Dunham opined that the combination of dynamic events acting on the motorcycle at the time of the accident resulted in "force oscillations," or vibrations, that resulted in the high-speed weave or wobble that caused Gregg to lose control. These dynamic events included, among other things, the crosswinds in the area, bumps in the roadway, the speed at which Gregg was traveling, the failure of the bolt and resulting failure of the left shock absorber, and the dropping of the motorcycle seat when the bolt broke. In Dunham's opinion, when the bolt broke, the motorcycle would have lost damping of lateral flex, preventing the motorcycle from responding properly to the various force oscillations to which it was subjected as it moved down the road. According to Dunham, harmonic resonance theory and the effects of external forces on stability and wobble in motorcycles have been discussed in peer-reviewed publications, including those listed as references in his report, and these are accepted concept within the engineering community.

Dunham testified that from his review of documents produced by Indian, it appears Indian redesigned the swing arm beginning with the 2002 model Chief, increasing the swing arm's stiffness and lateral rigidity by some 300%. Dunham opined that if Gregg's motorcycle had been equipped with the swing arm from this later Indian Chief design, or

from the Harley Davidson motorcycle that was tested, Gregg's accident would not have occurred.

In Dunham's opinion, Indian should have advised its dealers and owners about the existence of weave or wobble in some Indian Chief motorcycles, and Indian should have advised them to replace the shock mount bolts.

Gregg seeks to introduce Dunham's opinions set forth above at the trial. At the motion hearings, Indian clarified that it is asserting *Daubert* grounds to prohibit Dunham from offering the following two opinions at trial: (1) that a broken shock bolt caused the motorcycle to go into a weave or wobble and caused the loss of control; and (2) that a too-flexible swing arm caused the motorcycle to go into a weave or wobble and caused the loss of control. In addition, Indian seeks to prohibit Dunham from offering the following specific opinions at the trial:

1. "Dunham's testimony about what loads the shock bolt were subjected to just before and at the time of the accident." Indian argues the opinion is speculative. Indian also argues this opinion is "based on assumptions that are inconsistent with the undisputed facts of this case," in that Dunham used the weight of a motorcycle carrying two 190-pound riders, whereas Gregg weighed 180 pounds at the time of the accident.
2. "Dunham's testimony that if the Harley Davidson swing arm, or the 2001 Indian design, had been on Mr. Gregg's motorcycle, this accident would not have occurred." Indian argues the opinion is speculative.
3. "Dunham's testimony that Indian data regarding swing arms (Plaintiff's Exhibits 26 and 42) prove that a 2002 design of swing arm was 300% stiffer laterally." Indian argues the opinion is speculative, and does not meet the standards of Federal Rule of Evidence 703.
4. "Dunham's testimony that when the shock bolt breaks, it sounds like a rifle shot." Indian argues the opinion is speculative.
5. "Dunham's . . . speculation about what caused the Moss and D'Antonio incidents, or any other alleged "wobble" or broken shock bolt incident on any other bike." Indian argues the

opinion is speculative, and does not meet the standards of Federal Rule of Evidence 703.

6. “Dunham’s testimony that the shock bolt ‘broke when it broke,’ that ‘we know that the bike wobbles when a bolt breaks because it happened in this accident,’ and that the 2001 Indian swing arm has a higher moment of inertia than the subject swing arm because ‘you’ll just have to take my word for it.’” Indian argues the opinion is speculative.
7. “Dunham’s testimony at deposition that Indian’s torque specification for the shock bolts was “‘too high.’” Indian argues the opinion is speculative.
8. “Dunham’s testimony that [when a shock bolt breaks,] the seat of the motorcycle would drop such that a rider would notice it.” Indian argues the opinion is speculative.
9. “Testimony by [Dunham] that the seat dropped on Mr. Gregg’s bike, he was ‘startled,’ and this led to his loss of control.” Indian argues the opinion is speculative.
10. “Dunham’s testimony regarding the damping effect that would be lost with a broken shock bolt on the left side.” Indian argues the opinion is speculative. Indian also argues this opinion constituted new, previously undisclosed testimony, rather than simply being rebuttal to Sangdahl’s testimony.

(Doc. No. 133)

“[A] court should consider a proposed expert’s full range of practical experience as well as academic or technical training when determining whether that expert is qualified to render an opinion in a given area.” *Smith v. Ford Motor Co.*, 215 F.3d 713, 718 (7th Cir. 2000). It is evident to the court that Dunham is a well-qualified expert in his field. The court finds his opinions regarding causation are relevant to the issues in the case and would, if properly supported, be helpful the jury. However, the court’s inquiry under *Daubert* does not end with a determination that Dunham is a qualified expert and his opinions might be useful to the jury. “Once initial expert qualifications and usefulness to the jury are established . . . , a district court must continue to perform its gatekeeping role by ensuring that the actual testimony does not exceed the scope of the expert’s expertise, which if not done

can render expert testimony unreliable under Rule 702, *Kumho Tire*, and related precedents.” *Wheeling Pittsburgh Steel Corp. v. Beelman River Terminals, Inc.*, 254 F.3d 706, 715 (8th Cir. 2001).

The court finds Dunham’s opinions that a broken shock bolt cause the Gregg motorcycle to go into a weave or wobble and caused the loss of control, and that a too-flexible swing arm caused the motorcycle to go into a weave or wobble and caused the loss of control, are admissible under the circumstances of this case. Although Indian may well be able to raise significant questions about the conclusions reached by Dunham, this is not grounds to exclude the testimony. *See Smith*, 215 F.3d at 718 (“[W]hen addressing whether expert testimony is reliable the district court should not consider the ‘factual underpinnings’ of the testimony but should determine whether ‘[i]t was appropriate for [the expert] to rely on the test that he administered and upon the sources of information which he employed,’” summarizing the holding in *Walker v. Soo Line R.R. Co.*, 208 F.3d 581, 587 (7th Cir. 2000)). *See also Daubert*, 509 U.S. at 596, 113 S. Ct. at 2798 (“Vigorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence.”). The court similarly finds Dunham’s opinions listed in paragraphs 1, 7, 8, and 10, above, are properly admissible at trial, and overrules Indian’s arguments to the contrary.

On the other hand, there is nothing to indicate Dunham either is qualified to give, or has adequate scientific basis for, the opinions in paragraphs 2, 3, 4, 5, 6, and 9, above. Thus, he will not be permitted to testify concerning these opinions. *See Smith v. Rasmussen*, 249 F.3d 755, 758-59 (8th Cir. 2001). As the Supreme Court held in *General Electric Co. v. Joiner*, 522 U.S. 136, 118 S. Ct. 512, 139 L. Ed. 2d 508 (1997):

[N]othing either in *Daubert* or the Federal Rules of Evidence requires a district court to admit opinion evidence that is connected to existing data only by the *ipse dixit* of the expert. A court may conclude that there is simply too great an analytical gap between the data and the opinion proffered.

Joiner, 522 U.S. at 146, 118 S. Ct. at 519. See *J.B. Hunt Transp., Inc. v. General Motors Corp.*, 243 F.3d 441, 444 (8th Cir. 2001) (“Expert testimony that is speculative is not competent proof and contributes nothing to a legally sufficient evidentiary basis.”) (citing *Concord Boat Corp.*, 207 F.3d at 1057); *In re Air Crash at Little Rock Ark.*, 291 F.3d at 514 1212, 1214 (8th Cir. 2002) (must be adequate nexus between scientific theory and subject of opinion); *Clark v. Takata Corp.*, 192 F.3d 750, 756-57 (7th Cir. 1999); *Weisgram, v. Marley Co.*, 169 F.3d 514, 521 (8th Cir. 1999) (expert testimony not reliable where there is lack of nexus between theory and conclusion).

The court next turns to consideration of the Engel motion

B. Lester B. Engel, Jr.

Engel is a metallurgical engineer, licensed as a Registered Professional Engineer in Ohio and Minnesota. He has a Master of Science in Metallurgical Engineering from the University of Cincinnati. He has more than thirty-eight years’ experience in, among other things, materials analysis, failure analysis, materials and process specifications, data analysis, and engineering standards and procedures. Although he has testified as an expert witness numerous times, this is the first case in which he has been asked to testify regarding the cause of a motorcycle accident, or regarding what warnings a motorcycle manufacturer should give its customers to prevent an accident.

Engel testified he performed a failure analysis of the left rear shock mount bolt on the Indian motorcycle owned by Gregg. He cut off the shock mount from the swing arm, cut it open, and removed the bolt from the casing for examination. Indian’s expert Mr. Sangdahl, and Indian’s attorney Mr. Reynolds, both were present during the procedure.

Engel opined the bolt in question had a fatigue crack that propagated over time, finally reaching a point where the loads caused a failure of the bolt. He disagrees with Sangdahl’s calculations and conclusion that the bolt sheared. Rather, Engel believes the bolt failed in “ductal bending.” Engel testified the fracture surface of the bolt in question evidences

“ductal dimples” -- a surface he testified is grossly different from the fracture surface of a shear, which is very smooth and almost nondescript. According to Engel, the presence of ductal dimples on the fracture surface of the bolt in question indicates there was a bending failure, rather than a shear.

Engel stated he has reviewed reports on the Sway Away shocks initially used on the motorcycle which indicate the shocks suffered from coil bind and also were mounted improperly. According to Engel, this means during use of the bike, excessive loads were applied to the shock mount bolt. He opined the fatigue fracture in the bolt in question was the result of the coil bind and the misalignment of the shocks, which were mounted with the brackets in the wrong place. He further opined that when the shocks were replaced, just a normal load would continue the propagation of the fatigue fracture, because once the crack has started, it can continue to propagate at even lower load levels. According to Engel, at some point the load caused the bolt to fail entirely, causing the bending failure.

Engel stated that as a metallurgical engineer, he can attempt to calculate or compute the amount of overload that results in the failure of the shock; that is, the amount of load that would cause bending stress high enough to result in failure of the bolt. In this case, he attempted to calculate the area of the remaining section of the bolt that existed immediately before the final failure. However, he learned Indian’s expert, Mr. Sangdahl, had used a graphics program to calculate that area, and Engel found Sangdahl’s conclusion to be more accurate than his own, so for purposes of his further calculations, he used Sangdahl’s number. From his further calculations, Engel concluded that 140 pounds of center load would have been required to produce bending and failure of the bolt, which was more than the load that was present when Gregg was sitting or riding on the motorcycle.

Engel opined the bolt failed at the time Gregg passed the van, not after he lost control of the motorcycle and it hit the ditch. Like Dunham, Engel testified that when a shock mount bolt fails, it changes the loading on the remaining shock, resulting in a significant drop in the height of the motorcycle’s seat that would be noticed immediately by a rider. Engel stated

the drop in the motorcycle's seat would be anywhere from 1" to 1.4". Upon questioning by the court, Engel acknowledged that he had not performed this calculation himself; the calculation was performed by others. He stated he had confirmed the calculation, to some extent, by interviewing other motorcycle riders who have experienced similar bolt failures. He also stated his training as an engineer indicates that if someone is sitting in a seat and it goes down an inch, the person will notice the drop.

Engel also testified about the testing he performed on the three swing arms. From his testing, and from his review of documents provided by Indian during discovery, Engel opined the later version of the Indian swing arm is roughly 300% stronger than the swing arm on Gregg's motorcycle.

Engel testified his work includes failure analyses on many different types of equipment, everything from failed hypodermic needles to gas-based turbines and chemical processing plant facilities. Based on his training and experience, Engel opined Indian should have warned everyone involved with these bikes, including dealers and owners, about the problems with the shock mount bolts.

On *Daubert* grounds, Indian objects to Engel's opinion that a broken shock bolt caused the motorcycle to go into a weave or wobble and caused the loss of control. Although Dunham is qualified to offer such an opinion, Engel is not. Engel is a well-qualified and experienced metallurgical engineer, but he does not have the background, training, or experience to give an opinion as to the dynamics or causation of a motorcycle accident. He is not permitted to give this opinion at trial.

Indian further seeks to prohibit Engel from testifying to the following opinions at trial:

1. "Engel's . . . testimony that Indian data regarding swing arms (Plaintiff's Exhibits 26 and 42) prove that a 2002 design of swing arm was 300% stiffer laterally." Indian argues the opinion is speculative, and does not meet the standards of Federal Rule of Evidence 703. Indian further argues the opinion is cumulative of Dunham's testimony. (*See* Doc. No. 140)

2. “Engel’s testimony that Mr. Gregg’s bike wobbled in Arizona and ‘there may have been other instances.’” Indian argues the opinion is speculative.
3. “Engel’s speculation about what caused the Moss and D’Antonio incidents, or any other alleged ‘wobble’ or broken shock bolt incident on any other bike.” Indian argues the opinion is speculative, and does not meet the standards of Federal Rule of Evidence 703.
4. “Testimony by . . . Engel that the seat dropped on Mr. Gregg’s bike, he was ‘startled,’ and this led to his loss of control.” Indian argues the opinion is speculative.
5. “Engel’s testimony to the effect that ‘any person knows that if your seat is lowered 1 inch, you notice it.’” Indian argues this opinion is not the proper subject of expert testimony.
6. “Engel’s testimony about how Indian should have warned customers or dealers to replace shock bolts.” Indian argues this opinion is not the proper subject of expert testimony.
7. “Engel’s testimony that the in-house Indian engineers should have solved the problem with the shock bolts ‘sooner.’” Indian argues this opinion is not the proper subject of expert testimony.
8. “Engel’s testimony that the 1999 and 2000 model Indian Chiefs were ‘prone to wobble instabilities’ as set forth in his deposition.” Indian argues this opinion is not the proper subject of expert testimony.

(Doc. No. 133)

The court finds there is nothing to indicate Engel either is qualified to give, or has an appropriate scientific basis for, any of the opinions listed above. He will not be permitted to offer those opinions at trial.²

The court now turns to Gregg’s motions to prohibit Douglas Manternach from offering opinion testimony, and to sequester Mr. Manternach during the trial.

²The court is not prohibiting Engel’s opinions on these matters because they are not the proper subjects of expert testimony, but on the basis that Engel is a metallurgical engineer and lacks the background and appropriate scientific basis to offer the opinions.

V. THE MANTERNACH MOTIONS

Gregg argues Douglas Manternach, former Director of Engineering for Indian, should be prohibited from offering opinion testimony at trial. Gregg notes Indian has not identified Manternach as an expert witness, and he is precluded from offering opinion testimony by Federal Rule of Evidence 701. Gregg claims Manternach's opinions are based on his engineering experience, which constitutes specialized knowledge within the scope of Federal Rule of Evidence 702, and therefore, he should have been designated as an expert and provided a report before his opinion testimony could be offered at trial.

Indian resists the motion, arguing Manternach's opinions are characterized fairly as "lay witness opinions" under Rule 701. Indian notes Gregg deposed Manternach in late April 2005, and there is no unfair surprise to Gregg regarding his opinions. Indian claims Manternach will testify only to matters within his own particularized knowledge by virtue of his position in Indian. If that is the case, then Manternach's opinion testimony would be admissible under Rule 701. *See* Fed. R. Evid. 701, Adv. Comm. Notes to 2000 Amendments ("Such opinion testimony is admitted not because of experience, training or specialized knowledge within the realm of an expert, but because of the particularized knowledge that the witness has by virtue of his or her position in the business.")

The rules draw a distinction, however, between opinions based on a witness's particularized knowledge due to his position within the business, and opinions that, for example, describe technical details, manufacturing specifications, or similar opinions requiring the type of specialized knowledge within the scope of Rule 702. As the Advisory Committee noted:

The [2000] amendment incorporates the distinctions set forth in *State v. Brown*, 836 S.W.2d 530, 549 (1992), a case involving former Tennessee Rule of Evidence 701, a rule that precluded lay witness testimony based on "special knowledge." In *Brown*, the court declared that the distinction between lay and expert witness testimony is that lay testimony "results from a process of reasoning familiar in everyday life," while expert testimony "results from a process of reasoning which can be

mastered only by specialists in the field.” The court in *Brown* noted that a lay witness with experience could testify that a substance appeared to be blood, but that a witness would have to qualify as an expert before he could testify that bruising around the eyes is indicative of skull trauma. That is the kind of distinction made by the amendment to [Rule 701].

(*Id.*)

Gregg objects to the following specific opinions offered by Manternach, arguing the opinions fall within the “process of reasoning which can be mastered only by specialists in the field”:

1. “A shock bolt failure would not cause instability and result in an accident[.]”
2. “[T]he shock bolts ‘really have nothing to do with the stability of the vehicle[.]’”
3. “[T]he shock itself merely suspends the motorcycle and ‘has nothing to do with the stability or alignment of anything[.]’”
4. “[A] shock bolt would not break absent a ‘significant impact load[.]’”
5. If the shock bolt “did break, the wheel ‘shouldn’t’ come in contact with the rear fender[.]”
6. “[E]ven if the fender did come in contact with the wheel, there would not be a control issue[.]”

(Doc. No. 121-2) The parties characterize these opinions as falling into three categories: (1) the cause of shock bolt failure, (2) whether shock bolt failure would cause the rear fender to contact the rear wheel, and (3) the effect of shock bolt failure, a fender contacting the wheel, or the failure of a shock absorber on the stability and control of the motorcycle. (*See* Doc. No. 127-2, p. 2; Doc. No. 139-1, p. 2)

Gregg argues Manternach has never experienced, personally, a shock bolt breaking or a fender dropping onto his wheel at highway speeds. (*Id.*) Gregg argues further that Manternach’s opinions regarding the cause of the shock bolt breaking, or the effect of

malfunctions in the shock bolt or fender on the motorcycle's stability, are based on Manternach's engineering experience, and not on his personal knowledge and reasoning.

On the first issue, Indian argues there is no dispute about the causes of shock bolt failure, noting that "in 2002[,] Indian instituted a voluntary recall which explained in great detail what was causing the shock bolts to fail." (Doc. No. 127-2, p. 2) The court finds Manternach can testify under Rule 701 regarding why Indian instituted the 2002 recall, and generally what Indian's conclusions were regarding causes of shock bolt failure. This is knowledge based on Manternach's personal experience as Indian's Director of Engineering. The court disagrees with Gregg that Manternach must have experienced shock bolt failure personally for him to be able to offer lay opinion testimony on this issue. Thus, Gregg's motion is **denied** regarding this opinion.

Indian stated it will not elicit opinion testimony from Manternach regarding whether a fender would drop onto the rear wheel in the event of shock bolt failure. Accordingly, Gregg's motion is **granted** with respect to that opinion, and Manternach may not offer the opinion at trial.

The parties' arguments largely concern the third opinion regarding the effects of shock bolt failure, shock absorber failure, or fender contact with the wheel, on the stability and control of the motorcycle. Indian claims Manternach took part in and/or witnessed in-house testing at Indian to reach his opinion that the loss of one shock absorber or failure of the shock bolt would not result in loss of control of the motorcycle. (*See id.*) Gregg argues that in Manternach's deposition, he indicated he *did not* actually view this testing, nor was the testing conducted within his department or under his control. (Doc. No. 131, pp. 1-2) Gregg has made a convincing argument that these opinions are not admissible under Rule 701. However, the court finds Gregg would not be prejudiced if Indian were allowed to designate Manternach as an expert out of time, even at this late date, for purposes of offering these opinions. Gregg has been aware of the opinions since Manternach's deposition in April 2005. Therefore, the court will excuse Indian's failure to designate Manternach as an expert

witness under Rule 702, and permit him to testify as an expert, so long as Indian serves an appropriate expert witness designation and report for Manternach by **September 20, 2006**.

Gregg also seeks to sequester Manternach during the trial. If Indian designates Manternach as an expert, then Manternach will be permitted to attend the trial pursuant to the court's order of July 13, 2006 (Doc. No. 155). If Indian elects not to designate Manternach as an expert witness, then to the extent Manternach sits at counsel table as Indian's corporate representative, his presence during the trial is permissible. If Manternach is not designated as Indian's corporate representative, then he must be sequestered pursuant to Federal Rule of Evidence 615, and the requirements of the court's trial management order (Doc. No. 52, § X).

VI. CONCLUSION

For the reasons set forth above, Indian's motion (Doc. No. 62) to preclude certain expert testimony of George F. Dunham, Gregg's motion (Doc. No. 121) to preclude the opinion testimony of Douglas Manternach, and Gregg's motion (Doc. No. 120) to sequester Manternach during the trial, are **granted in part and denied in part**, consistent with this opinion. Indian's motion (Doc. No. 106) to preclude certain expert testimony of Lester B. Engel, Jr. is **granted**.

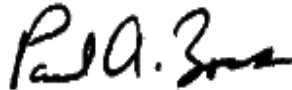
To the extent the court has ruled certain opinions are inadmissible, the parties' attorneys are instructed to advise their witnesses to make no reference to those opinions in their testimony at trial, and the attorneys are directed not to ask questions of the witnesses at trial that might elicit those opinions.

The parties are, of course, free to make appropriate objections to the testimony of any witness at trial.

Any appeal³ from this order must be filed by **September 22, 2006**.⁴ Any party who anticipates filing an appeal from this order must order a transcript of the *Daubert* hearings promptly (in any event by **September 15, 2006**), **regardless of whether the party believes a transcript is necessary to argue the appeal.**

IT IS SO ORDERED.

DATED this 13th day of September, 2006.



PAUL A. ZOSS
MAGISTRATE JUDGE
UNITED STATES DISTRICT COURT

³ As to any matter ruled upon herein which a party believes falls solely within the jurisdiction of the trial court, *see* LR 71.1(g).

⁴ Given the looming trial date, the court has shortened the time to appeal under Local Rule 72.2.